STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

BULLETIN No. 95

TUOLUMNE COUNTY WATER DISTRICT NO. 2 INVESTIGATION

Summary and Comments on
Public Hearing and Discussion of
Present Plans for Development

AUGUST 1967

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FOREWORD

This supplement serves as the final edition of Bulletin No. 95, "Tuolumne County Water District No. 2 Investigation". The supplement presents (1) information concerning the investigation, (2) a summary of the comments received at the public hearing held in Sonora on January 17, 1964, and (3) a description of the Tuolumne River Project as presently proposed by Tuolumne County Water District No. 2.

The preliminary edition of Bulletin No. 95 has served as a planning guide to Tuolumne County Water District No. 2. Information and data gathered during the investigation have been useful to the District in formulating the Tuolumne River Project. The District's project is similar to the Tuolumne Project proposed in the preliminary edition of Bulletin No. 95. The principal changes are the omission of power as a project purpose and the reduced size of the proposed Brownes Meadow Reservoir.

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INTRODUCTION

In 1957 the people of Tuolumne County became concerned with the adequacy of future water supplies. Large reservoirs were being actively proposed downstream on the Stanislaus and Tuolumne Rivers, but projects to serve the upper areas were not considered. Therefore, the Tuolumne County Water District No. 2 obtained the assistance of the Department of Water Resources to investigate the feasibility of developing water resources that would serve the future needs of Tuolumne County lands lying upstream from these proposed downstream reservoirs.

The District requested the Department to report on the scope and cost of a cooperative investigation. After an agreement on joint financing was negotiated, the investigation was carried out during the 1958-59 and 1959-60 fiscal years. A draft of a proposed report was given limited distribution in March 1961, and a preliminary edition of Bulletin No. 95 "Tuolumne County Water District No. 2 Investigation", was released in October 1962. A public hearing on the preliminary edition was held in Sonora on January 17, 1964.

The preliminary edition presented information on water supply, water use, and three proposals for local development: (1) Tuolumne Project, (2) Modified Tuolumne Project, and (3) Strawberry-Tuolumne Project. In addition, a Spicer Meadow Project in the Stanislaus River Basin was proposed for joint development with Calaveras County. The feasibility of the proposals for local development, which required considerable investment, was dependent upon the ability of the project

sponsors to capitalize the estimated benefits from the conservation, domestic, recreation, and power purposes of the projects.

The criteria on which the projects were based during the investigation have since changed. This is evidenced by statements made at the public hearing by the District and by the Tuolumne River Project presently proposed by the District. This project, which is discussed on page 8, is similar to the Tuolumne Project proposed in the preliminary edition of Bulletin No. 95, except that (1) the power function has been eliminated and (2) a smaller reservoir is proposed at one site.

PUBLIC HEARING

On January 17, 1964, a public hearing on the preliminary edition of Bulletin No. 95 was conducted in Sonora by Carl L. Stetson, District Engineer, San Joaquin District, Department of Water Resources. A transcript of the hearing and copies of the preliminary edition are on file with the Department of Water Resources.

A summary of major comments by concerned Agencies is presented below.

Tuolumne County Water District No. 2

The investigation, studies, and discussions of the future water needs of the lands in the District are important and have been subject to a close review by the District and its staff. The District believes that the future water needs have been realistically estimated and will be of great value in planning future facilities to distribute water.

Since publication of the preliminary edition, the District has closely studied the water requirements of the Long Barn Service Area. It is believed that this service area will reach 100 per cent of ultimate water requirements by the year 2020 as compared to the 50 per cent predicted by the Department for that year.

The projects proposed were competently conceived, and the construction costs shown are realistic. However, in the opinion of the District, the present status of development within the District would not now justify assumption of the financial obligations that would result from construction of any of these projects.

The District is thus proceeding with its Tuolumne River Project for domestic use and recreation. The District is also proceeding with plans for a hydroelectric power project on the North and Middle Forks of the Stanislaus River.

Modesto and Turlock Irrigation Districts

Interested water agencies on the Tuolumne River (Tuolumne County Water District No. 2, City and County of San Francisco, Modesto Irrigation District, Turlock Irrigation District and Waterford Irrigation Distric have entered into an agreement[1/] which will enable Tuolumne County Water District No. 2 to proceed with its Tuolumne River Project.

Extensive comments were made on water rights and their effects on projects proposed in the preliminary edition of the report. (These comments are not documented here as the projects proposed in the bulletin are not being updated in this supplement, and the agreement cited above will enable Tuolumne County Water District No. 2 to proceed with its Tuolumne River Project.)

The Districts submitted a proposed addition to Table 20, Page 81 of the preliminary edition showing water rights of Modesto, Turlock, and Waterford Irrigation Districts prior to December 1914 which the Districts believe are important considerations in the water rights of the Tuolumne River.

City and County of San Francisco

San Francisco is an upstream appropriator on the Tuolumne River and is vitally interested in all operations on the Tuolumne. The City

1/ "Agreement Between Tuolumne County Water District No. 2, The County of Tuolumne (Tuolumne County Interests), and Turlock, Modesto, and Waterford Irrigation Districts, and the City and County of San Francisco (Downstream Interests); in Regard to Use of Water in the Upper Tuolumne River Watershed" was entered into on December 2, 1963."

also has specific obligations under (1) the provisions of the Congressional Act known as the Raker Act and (2) existing agreements with the Modesto and Turlock Irrigation Districts and with the U. S. Army Corps of Engineers. The City will participate with the Modesto and Turlock Irrigation Districts in the construction of the New Don Pedro Project and acquire exchange storage therein. Any developments on the Tuolumne River below the San Francisco facilities will affect that city's obligations.

The City commented that certain statements on water rights in the preliminary edition are taken out of context. The City has made and relies on 45 appropriations on the Hetch Hetchy, Eleanor, and Cherry Watersheds to support its right to export 400 million gallons daily and to operate its Moccasin, D. R. Holm, and R. C. Kirkwood Power Plants.

The City commented that during 1960-63 an annual average of 167,000 acre-feet was exported with a maximum of 174,000 acre-feet exported during 1962. Additional water transmission facilities are now being constructed; these will increase the City's export capability to 330,000 acre-feet annually by 1968.

Export by the City constitutes a consumptive use. There is also a nonconsumptive use involving power generation. The water returned to the Tuolumne River by the City is subsequently utilized by the Modesto and Turlock Irrigation Districts for irrigation and power generation. During dry years there is no water in the Tuolumne River Basin that is not used by the City and the Districts under their water rights.

PLANS FOR LOCAL DEVELOPMENT

Following completion of the cooperative investigation, local agencies and interested individuals in Tuolumne County considered possible methods to implement water resource development. In 1957 the State Legislature, recognizing that local public agencies needed assistance to develop their water resources, enacted legislation which was further amended in 1959 and designated as the Davis-Grunsky Act. Passage of the California Water Development Bond Fund by the electorate in 1960 authorized a $1,750,000,000 bond issue for construction of the State Water Resources Development System. Of this bond issue, $130,000,000 was specifically earmarked for local assistance under the Davis-Grunsky Act. Local agencies and individuals in Tuolumne County who had taken an active part in the development and enactment of the Davis-Grunsky Act proceeded to implement proposals evolved under the Tuolumne County Water District No. 2 Investigation into projects that could be constructed under the Act.

Tuolumne County Water District No. 2 filed a request for preliminary determination of eligibility for state financial assistance under the Davis-Grunsky Act on June 11, 1962.

On December 28, 1964, the District approved a revised feasibility report and approved its submission to the Department, thus completing the District's formal application for grants for its Tuolumne River Project under the Davis-Grunsky Act.

The District has entered into the agreements and understandings cited below to implement its Project.

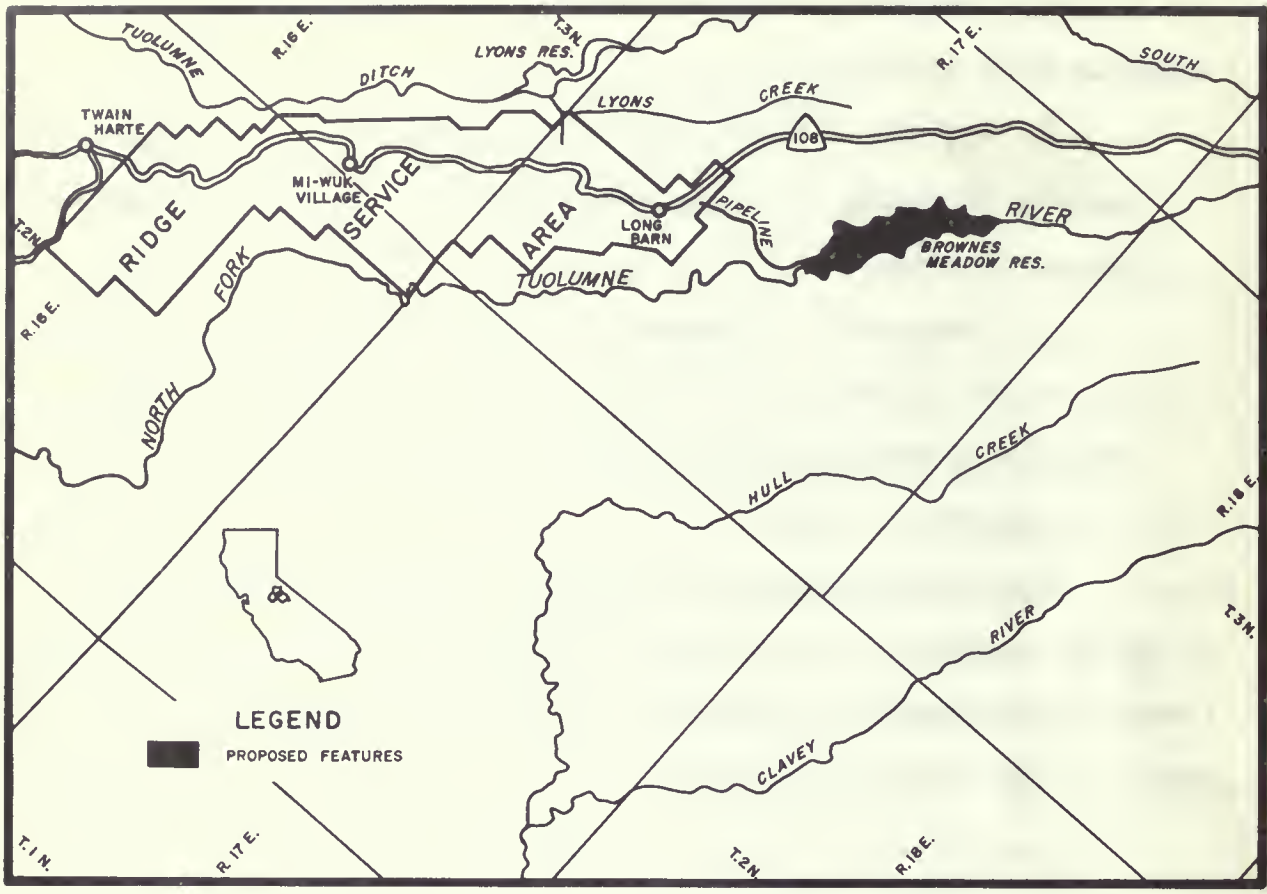
1. Previously cited agreement between Tuolumne County Interests

and Downstream Interests on use of water in Upper Tuolumne River Watershed dated December 2, 1963.

2. "Stipulation and Agreement 'Tuolumne River Project' Between Tuolumne County No. 2 and California Department of Fish and Game", October 2, 1964.

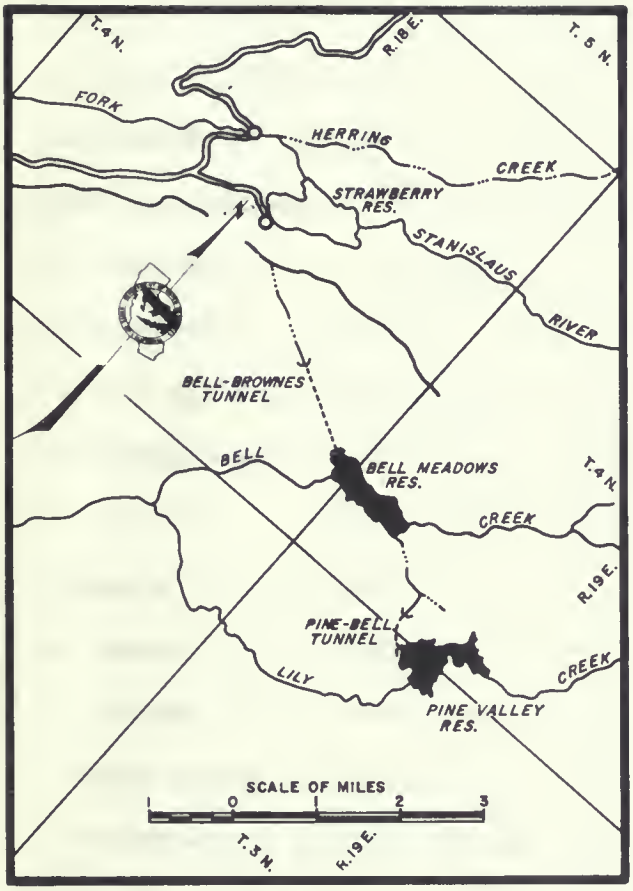
3. "Memorandum of Understanding Between Tuolumne County Water District No. 2 and the United States Forest Service Covering Construction of Subsequent Operation of Tuolumne River Project", dated December 1, 1965.

The Department and the District are continuing their efforts to develop an effective plan so that the District can obtain the necessary financial assistance under provisions of the Davis-Grunsky Act to construct the Tuolumne River Project.



Tuolumne River Project

The Tuolumne River Project would consist of Pine Valley, Bell Meadows, and Brownes Meadow Dams and Reservoirs; recreation facilities and access roads; Pine-Bell and Bell-Brownes Tunnels; and domestic water supply facilities. Access roads for construction of the proposed project would be located along the alignment and grade agreed upon by Tuolumne County and Stanislaus National Forest as being suitable for future development. The two proposed tunnels will enable diversion of water from Pine Valley Reservoir into Bell Meadows Reservoir and from Bell Meadows Reservoir into Brownes Meadow Reservoir. Recreation facilities would be



constructed in the vicinity of each of the three proposed reservoirs. The proposed domestic water supply facilities would convey water from Brownes Meadow Reservoir to the proposed Ridge Service Area between Twain Harte and Long Barn. Individual features of the proposed project are described in the following paragraphs.

Pine Valley Dam would be constructed on Lily Creek, a tributary of the Clavey River, which is a tributary of the Tuolumne River. It would be a concrete, gravity-type structure with a crest elevation of 7,036 feet and a maximum height of about 65 feet. The reservoir would have a gross storage capacity of 2,600 acre-feet and a water surface area of 160 acres. An access road would be provided from Bell Meadows and would generally follow the existing trail route to Pine Valley. Initial recreation facilities would provide 50 camping units with appropriate parking facilities, 15 picnicking units, and 50 car parking spaces.

The Pine-Bell Tunnel would enable diversion of waters of Lily Creek from Pine Valley Reservoir to Bell Meadows Reservoir on Bell Creek. The tunnel would have an inside diameter of 7 feet 4 inches and would be 2,550 feet in length.

Bell Meadows Dam would be constructed on Bell Creek, another tributary of the Clavey River. An auxiliary dam would also be constructed on a saddle about one-quarter mile northwest of the damsite. Each dam would be of the rockfill type with impervious earthen central core and would have a crest elevation of 6,613 feet. The main dam would have a maximum height of about 90 feet, and the auxiliary dam would have a maximum height of about 60 feet. These dams would form a reservoir having a gross storage capacity of 12,000 acre-feet and a maximum water surface area of 305 acres.

Access to the reservoir would be from Highway 108 at a point southwest of Pinecrest to relieve traffic congestion on this highway at Pinecrest. Initial recreation facilities would provide 150 camping units with appropriate parking facilities, 36 picnicking units, 65 car parking spaces, 100 car and boat-trailer parking spaces at the boat launch ramp, a 2-lane boat launch ramp, and a 5-acre beach development.

The Bell-Brownes Tunnel would serve to divert the combined flows of Lily and Bell Creeks from Bell Meadows Reservoir into the upper reaches of Sheering Creek, thence to the North Fork Tuolumne River near Pinecrest. The tunnel would be concrete-lined and horseshoe-shaped with an inside diameter of 6 feet and a length of 4,550 feet. Water released from this tunnel would flow down Sheering Creek to its confluence with the North Fork Tuolumne River, thence down the North Fork Tuolumne River a distance of 6 miles into the proposed Brownes Meadow Reservoir.

The proposed Brownes Meadow Dam would be constructed on the North Fork Tuolumne River at a point about 2 miles east of Long Barn.

The dam would be of the rockfill type with impervious earthen central core with a crest elevation of 4,844 feet. The maximum height of the dam would be about 175 feet. The dam would provide a reservoir with a gross storage capacity of 35,000 acre-feet and a maximum water surface area of 615 acres. The reservoir would store the natural runoff of the North Fork Tuolumne River and waters diverted from Lily and Bell Creeks.

Access to the Brownes Meadow site would be provided from Highway 108 near Long Barn. Initial recreation facilities would provide 200 camping units with appropriate parking facilities, 75 picnicking units, 125 car parking spaces, 100 car and boat-trailer parking spaces at the boat launch ramp, a 2-lane boat launch ramp, and a 12-acre beach development. Releases from the reservoir would be made to enhance stream fisheries for a distance of 22.5 miles on the North Fork Tuolumne River downstream from Brownes Meadow Reservoir. The reservoir also would provide both a source of water supply and storage for domestic use in the proposed Ridge Service Area.

Initial domestic water supply facilities would consist of a pump-turbine unit adjacent to the Brownes Meadow Dam, 7,700 feet of 12-inch pipelines to a treatment plant located on a ridge about one mile northeast of Long Barn, and 3,000,000 gallons of storage as well as pipelines necessary for the distribution of water to the proposed Ridge Service Area.

The pump-turbine unit would utilize the energy available from fishery enhancement releases from Brownes Meadow Reservoir to drive the pump unit for delivery of domestic water to the treatment plant. The initial installation would be capable of delivering 200 acre-feet of water per month to the treatment plant for processing.